JUSTIN J. GRACE

Machine Learning & Data Scientist

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EXPERIENCE

Senior Machine Learning Engineer
Unibuddy

📅 Oct 2018 – Present   ♀ London, UK

- Technical role developing Neural Question-Answering systems to improve interactions on the chat platform.
- Paraphrase detection with questions; Text classification for dialogue analytics.
- Wrote libraries (Tensorflow) for transfer learning with SOTA sentence encoding (BERT, etc.)
- Deployed production ML microservices using flask
- Developed programmatic & crowd-sourced methods for labelling data

Return to full-time education: M.Sc. in Artificial Intelligence
University of Edinburgh

📅 Sept 2017 – Sept 2018   ♀ Edinburgh, UK

- Thesis on text summarization using generative sequence-to-sequence models, multitask learning and understanding latent representations using transfer learning.

Lead Technologist
Digital Catapult

📅 Apr 2016 – Apr 2017   ♀ London, UK

- Technical & strategic role developing supporting platforms for industrial AI & machine learning applications. Managed small data science team.
- Developed semantic search engine to find companies using web-scraped free text to speed up partner discovery.

Lead Data Scientist
Sony Interactive Entertainment / PlayStation

📅 Feb 2015 – Apr 2016   ♀ London, UK

- Technical & leadership role applying machine learning & computational statistics.
- Trained & deployed neural ensemble model to generate customer segmentation for 40M customers based on behavioural data; enabling personalized marketing.

Principal Data Scientist
Guardian Media Group / the Guardian

📅 Oct 2014 – Jan 2015   ♀ London, UK

- Worked in a small team to deliver models and data products. Managed one graduate data scientist.
- Drove adoption of scientific approach to product development and developed multivariate testing framework. Statistical modelling for understanding customer behaviour to help with business strategy.

MOTIVE

I am seeking a role as a *machine learning scientist with a focus on deep learning methods and neural natural language processing (NLP)*. I have **5 years of industrial experience as a machine learning engineer and data scientist**, working in higher education, news media, interactive entertainment and technology/innovation industries and **4 years as an academic research scientist**, working in medical (biostatistics), neuroscience and human-computer interaction fields.

KEY SKILLS

Machine Learning

Deep Neural Networks   NLP

Question-Answer Systems

Text Summarization   Dialogue Systems

CNNs   RNNs   Siamese architecture

Maths & Statistics

Experimental Design

Evaluation & Validation

Tensorflow   Pytorch   NLTK   Spacy

SciKitLearn   Numpy   Pandas

GPU processing   AWS   Flask

Databases

PROFICIENCIES

Python   ●●●●○

SQL/NoSQL   ●●●○○

R   ●●●○○

HTML, JS, CSS   ●●○○○

Java   ●○○○○

Director

Delta Sigma Ltd.

📅 Sept 2013 – Jul 2019   📍 London, UK

- Data science and statistics consultancy services.
- Technical contributions to 2 successful grant bids with Innovate UK for over £1.5M.
- Invited speaker at TEDxUCL on data science and ethics.

Co-founder & CTO

MediCurve Ltd.

📅 Mar 2012 – Aug 2013   📍 London, UK

- Startup initiated by a business competition.

Research Scientist in Public Health & Stroke Medicine

Kings College London

📅 Oct 2011 – Oct 2013   📍 London, UK

- Development of patient-specific stroke recovery prediction models and software (web app) for a clinical assistant tool.
- Developed significant expertise in computational statistics for medical prognostics including methods for hierarchical multi-level polynomial regression, missing data imputation and model validation.

Doctoral Research Associate in Action & Cognition

Donders Institute for Brain, Cognition & Behaviour

📅 Sept 2010 – Oct 2011   📍 Nijmegen, NL

- Research & statistical modelling on: cognitive & neuroscientific models of embodied cognition of language, decision making & action planning.

Research Associate in Human-Computer Interaction

University College London

📅 Sept 2009 – Sept 2010   📍 London, UK

- Research & statistical modelling on: multi-tasking with devices whilst driving in a simulated environment. Supervised two student research projects.

PUBLICATIONS

- Douiri, A. et al. (2017). "Patient-specific prediction of functional recovery after stroke". In: *International Journal of Stroke* 12.
- Grace, J., A. Douiri, and A.G. Rudd (2014). "A patient-specific predicting tool for functional recovery after stroke." In: *Proc. International Conference for Biostatistics.*
- – (2013). "A patient-specific predicting tool for functional recovery after stroke." In: *Proc. European Stroke Conference.*
- Brumby, D. et al. (2011). "Fast or safe? how performance objectives determine modality output choices while interacting on the move." In: *Proc. Human factors in computing systems*, pp. 473–482.

Our work examining the evolutionary history of brain volume, testing social and cognitive theories, received some kind attention at the 2008 Louisville Behavior Genetics Association in:

- Holden, C (2008). "The Sociable Brain". In: *Science.*

EDUCATION

M.Sc. in Artificial Intelligence

University of Edinburgh

📅 Sept 2017 – Sept 2019   📍 Edinburgh, UK

Thesis: Evaluating latent representations in encoder-decoder models for text summarization with multitask and transfer learning

Ph.D in Cognitive Neuroscience

Donders Institute for Brain, Cognition & Behaviour

📅 Sept 2010 – Oct 2011   📍 Nijmegen, NL

Thesis: The role of the motor cortex and limbic system in processing emotive language. *Not completed.*

M.Sc. in Human Cognitive Neuroscience

University of Edinburgh

📅 Sept 2008 – Sept 2009   📍 Edinburgh, UK

Thesis: Testing embodied cognition models of language in the disordered brain

M.A. in Pyschology & Linguistics (dual hons.)

University of Edinburgh

📅 Sept 2004 – Sept 2008   📍 Edinburgh, UK

Thesis: The predictors of human social complexity

REFEREES

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